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| 10/692,188 | 10/23/2003 | Douglas R. Manley | 10031229-1 | 8438 |

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AGILENT TECHNOLOGIES, INC.
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EXAMINER

BONURA, TIMOTHY M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2114 | |

DATE MAILED: 09/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/692,188 | Applicant(s) MANLEY ET AL. | |
| | Examiner Tim Bonura | Art Unit 2114 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13-24, 32-41 and 49-74 is/are rejected.
- 7) ☒ Claim(s) 6-12, 25-31 and 42-48 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/23/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- **Claims 1-5, 18-24, 37-41, and 54-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chirashnya, et al, U.S. Patent Publication Number 2002/0019870 (soon to be published patent number 7,113,988) and further in view of Skaanning, et al, U.S. Patent Number 6,879,973.**
- **Claims 13-17, 32-36, and 49-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**
- **Claims 6-12, 25-31, and 42-48 objected to as being dependent upon a rejected base claim.**

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-5, 18-24, 37-41, and 54-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chirashnya, et al, U.S. Patent Publication Number 2002/0019870 (soon to be

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published patent number 7,113,988) and further in view of Skaanning, et al, U.S. Patent Number 6,879,973.

4. Regarding claim 1:

a. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

b. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

c. Regarding the limitation of "assigning a weight to the candidate diagnosis based on a combined unviolated utilization of the candidate diagnosis by failing system tests, the weight thereby indicating a level of confidence that the candidate diagnosis is correct," Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5)

and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

5. Regarding claim 2, Skaanning discloses a system with inaccuracy factor. (Liens 25-30 of Column 5). Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

6. Regarding claim 3, Skaanning discloses a system wherein a domain expert is used to identify causes and sub-causes of issues raised in the system. (Lines 44-50 of Column 4).

7. Regarding claim 4, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

8. Regarding claim 5, Skaanning discloses a system wherein an issue can have multiple causes and sub-causes, which effect the action taken. (Lines 10-15 and 25-30 of Column 5).

9. Regarding claim 18, Skaanning discloses a system with cost factored into the diagnostic step calculation. (Lines 39-45 of Column 6).

10. Regarding claim 19, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

11. Regarding claim 20, Chirashnya disclose a system, which calculates a malfunction rate of modules. (Paragraph 0010).

12. Regarding claim 21, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

13. Regarding claim 22:

d. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

- e. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).
- f. Regarding the limitation of "assigning a weight to the candidate diagnosis based on a combined unviolated utilization of the candidate diagnosis by failing system tests, the weight thereby indicating a level of confidence that the candidate diagnosis is correct," Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).
14. Regarding claim 23, Skaanning discloses a system with inaccuracy factor. (Lines 25-30 of Column 5). Chirashnya discloses a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).
15. Regarding claim 24, Skaanning discloses a system wherein an issue can have multiple causes and sub-causes, which effect the action taken. (Lines 10-15 and 25-30 of Column 5).

16. Regarding claim 37, Skaanning discloses a system with cost factored into the diagnostic step calculation. (Lines 39-45 of Column 6).

17. Regarding claim 38, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

18. Regarding claim 39, Chirashnya disclose a system, which calculates a malfunction rate of modules. (Paragraph 0010).

19. Regarding claim 40, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

20. Regarding claim 41:

g. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

h. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

i. Regarding the limitation of "assigning a weight to the candidate diagnosis based on a combined unviolated utilization of the candidate diagnosis by failing system tests, the weight thereby indicating a level of confidence that the candidate diagnosis is correct," Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning

discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012). Skaanning discloses a system wherein an issue can have multiple causes and sub-causes, which effect the action taken. (Lines 10-15 and 25-30 of Column 5).

21. Regarding claim 54, Skaanning discloses a system with cost factored into the diagnostic step calculation. (Lines 39-45 of Column 6).

22. Regarding claim 55, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

23. Regarding claim 56, Chirashnya disclose a system, which calculates a malfunction rate of modules. (Paragraph 0010).

24. Regarding claim 57, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

25. Regarding claim 58:

j. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

- k. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).
- l. Regarding the limitation of "assigning a weight to the candidate diagnosis based on a combined unviolated utilization of the candidate diagnosis by failing system tests, the weight thereby indicating a level of confidence that the candidate diagnosis is correct," Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).
26. Regarding claim 59, Chirashnya disclose a system, which calculates a malfunction rate of modules that inherently is an inverse of a pass rate. (Paragraph 0010).
27. Regarding claim 60, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

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28. Regarding claim 61, Skaanning discloses a system wherein an issue can have multiple causes and sub-causes, which effect the action taken. (Lines 10-15 and 25-30 of Column 5).

29. Regarding claim 62, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

30. Regarding claim 63, Skaanning discloses a system with cost factored into the diagnostic step calculation. (Lines 39-45 of Column 6).

31. Regarding claim 64, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

32. Regarding claim 65, Chirashnya disclose a system, which calculates a malfunction rate of modules. (Paragraph 0010).

33. Regarding claim 66, Chirashnya disclose a system with malfunction threshold levels, which declare module functionality. (Paragraph 0010).

34. Regarding claim 67:

m. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

n. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the devise in the network to estimated malfunction rates. (Paragraph 0010).

o. Regarding the limitation of "assigning a weight to the candidate diagnosis based on a combined unviolated utilization of the candidate diagnosis by failing system tests, the weight thereby indicating a level of confidence that the candidate diagnosis is

correct,” Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

35. Regarding claim 68:

p. Regarding the limitation of “diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test,” Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

q. Regarding the limitation of “generating a candidate diagnosis potentially responsible for a failing system test,” Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

r. Regarding the limitation of “assigning a weight to the candidate diagnosis based on a combined utilization of the candidate diagnosis by passing system tests, the weight thereby indicating a level of confidence that the candidate diagnosis is correct,”

Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

36. Regarding claim 69:

s. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

t. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

u. Regarding the limitation of "assigning a weight to the candidate diagnosis based on an observed variability of the results of the at least one system test, the weight thereby indicating a level of confidence that the candidate diagnosis is correct,"

Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

37. Regarding claim 70:

- v. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).
- w. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).
- x. Regarding the limitation of "assigning a weight to the candidate diagnosis based on an utilization outside of a hitting set of subcomponents of at least one of the components of the candidate diagnosis by the at least one system test, the weight

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thereby indicating a level of confidence that the candidate diagnosis is correct,”

Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

38. Regarding claim 71:

y. Regarding the limitation of “diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test,”

Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

z. Regarding the limitation of “generating a candidate diagnosis potentially responsible for a failing system test,” Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

aa. Regarding the limitation of “assigning a weight to the candidate diagnosis based on a combined unviolated utilization of the candidate diagnosis by failing system tests,

the weight thereby indicating a level of confidence that the candidate diagnosis is correct," Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

39. Regarding claim 72:

bb. Regarding the limitation of "diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test," Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

cc. Regarding the limitation of "generating a candidate diagnosis potentially responsible for a failing system test," Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

dd. Regarding the limitation of "assigning a weight to the candidate diagnosis based on a combined utilization of the candidate diagnosis by passing system tests, the weight

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thereby indicating a level of confidence that the candidate diagnosis is correct,”

Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

40. Regarding claim 73:

ee. Regarding the limitation of “diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test,” Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

ff. Regarding the limitation of “generating a candidate diagnosis potentially responsible for a failing system test,” Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

gg. Regarding the limitation of “assigning a weight to the candidate diagnosis based on an observed variability of the results of the at least one system test, the weight

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thereby indicating a level of confidence that the candidate diagnosis is correct,”

Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

41. Regarding claim 74:

hh. Regarding the limitation of “diagnosing faults in a system under test (SUT) having a plurality of components, the SUT having been tested by at least one system test,” Chirashnya discloses a system of a Bayesian Network of a switched network that provides diagnostic methods in dealing with the network and alarms. (Paragraph 0010).

ii. Regarding the limitation of “generating a candidate diagnosis potentially responsible for a failing system test,” Chirashnya discloses a system with a diagnostic system that maintains local fault models for the device in the network to estimated malfunction rates. (Paragraph 0010).

jj. Regarding the limitation of “assigning a weight to the candidate diagnosis based on an utilization outside of a hitting set of subcomponents of at least one of the

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components of the candidate diagnosis by the at least one system test, the weight thereby indicating a level of confidence that the candidate diagnosis is correct,"

Chirashnya discloses a system wherein the diagnostic system produces a second order failure rate assessment as a process of initial assessment and correction. (Paragraph 0012). Chirashnya does not disclose a system in which a calculation is performed for the confidence level of the diagnosis of the candidate. Skaanning discloses a system with a calculation for a first action (diagnosis) is accurate/inaccurate. (Lines 24-28 of Column 5). One of ordinary skill in the art at the time of the invention would have been inclined to combine the Bayesian system of Chirashnya with the diagnosis system of Skaanning. One of ordinary skill would have been included because the prior art of Skaanning goes to a second level of diagnosis of a fault for Bayesian Networks (30-35 of Column 5), in which both Chirashnya (line 5 of Column 5) and Skaanning are (Paragraph 0012). Chirashnya discloses a desire for second order probability, which Skaanning meets. (Paragraph 0012).

Claim Rejections - 35 USC § 112

42. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

43. Claims 13-17, 32-36, and 49-53 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

44. Regarding claims 13, 32, and 49, the claims recite limitations that are not comprehensible to the examiner. The claims are generally narrative and indefinite, failing to

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conform with current U.S. practice. The examiner cannot determine what the claimed subject matter's intent are. They contain idiomatic errors.

45. As such claims 14-17, 33-36, and 50-53 also stand rejected due to the fact that they are dependant upon the above rejected claims.

Allowable Subject Matter

46. Claims 6-12, 25-31, and 42-48 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

47. The following is a statement of reasons for the indication of allowable subject matter:

kk. Regarding claims 6, 25, and 42: The claimed subject matter of "wherein the observed variability of the results of the system tests is defined by an observed variability of a pass-fail conflicted shared function" could not be found in any prior art.

Drawings

48. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, all claimed subject matter must be shown, the system under test must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

49. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

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must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Conclusion

50. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tim Bonura**.

- The examiner can normally be reached on **Mon-Fri: 8:30-5:00**.
- The examiner can be reached at: **571-272-3654**.

51. If attempts to reach the examiner by telephone are unsuccessful, please contact the examiner's supervisor, **Scott Baderman**.

- The supervisor can be reached on **571-272-3644**.

52. The fax phone numbers for the organization where this application or proceeding is assigned are:

- **703-872-9306 for all patent related correspondence by FAX.**

53. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

54. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **receptionist** whose telephone number is: **571-272-2100**.

55. Responses should be mailed to:

- **Commissioner of Patents and Trademarks**

P.O. Box 1450

Alexandria, VA 22313-1450

Tim Bonura
Examiner
Art Unit 2114

A handwritten signature in black ink, appearing to read 'Tim Bonura', with a stylized flourish extending to the right.

September 7, 2006